

In the Claims

1 1. (currently amended) A method for rendering, comprising:
2 defining a rendering request, the rendering request describing an
3 object to be rendered in a single rendering pipeline including a plurality set
4 of stages connected serially to each other as a sequence of stages so that
5 output of a previous stage provides input to a next stage, the sequence of
6 stages including, in order, a preprocessed shape descriptor determination
7 stage, a distance field determination stage, a distance values determination
8 stage, an antialiased intensities determination stage, and a colorized image
9 determination stage, and where the distance field determination stage
10 determines a distance from a point in a co-planar field to an edge of the
11 object, where the sign of the distance is negative if the point is outside the
12 object, positive if the point is inside the object, and points on the edge
13 having a zero distance;
14 querying a progressive cache to determine a most finished cached
15 element representing a display image satisfying the rendering request, the
16 progressive cache including a plurality set of caches, the set of caches
17 including a preprocessed shape descriptor cache, a distance field cache, a
18 distance values cache, an antialiased intensities cache, and a colorized image
19 cache, each cache in the set of caches arranged to store cached elements in a
20 least finished to a most finished order, there being one cache associated with
21 each stage;
22 sending the most finished cached element to a starting stage of a
23 rendering pipeline for the object, the starting stage being a next stage of the
24 rendering pipeline corresponding to the most finished cached element; and

25 sending an output of the starting stage to an input of a next stage of
26 the rendering pipeline, a final stage of the rendering pipeline determining the
27 display image satisfying the rendering request.

1 2. (original) The method of claim 1 wherein an output of a stage of the
2 rendering pipeline is sent to the progressive cache.

1 3. (canceled)

1 4. (canceled)

1 5. (canceled)

1 6. (canceled)

1 7. (canceled)

1 8. (canceled)

1 9. (original) The method of claim 6 wherein distance values for a component
2 of a pixel of the display image are stored in the distance values cache.

1 10. (original) The method of claim 9 wherein the distance values for the
2 component of the pixel of the display image are combined prior to
3 determining an antialiased intensity for the component of the pixel.

1 11. (currently amended) The method of ~~claim 3~~ claim 1 further comprising:
2 compressing data stored in a particular cache in the set of caches.

1 12. (original) The method of claim 1 wherein the progressive cache finds a
2 cache element using hashing.

1 13. (currently amended) The method of ~~claim 3~~ claim 1 wherein the
2 progressive cache eliminates least recently used cached elements from a
3 particular cache in the set of caches when the particular cache is full.

1 14. (canceled)

1 15. (currently amended) The method of ~~claim 14~~ claim 1 wherein a
2 particular stage in the sequence of stages processes the rendering request.

1 16. (canceled)

1 17. (canceled)

1 18. (canceled)

1 19. (canceled)

1 20. (canceled)

1 21. (original) The method of claim 1 wherein the starting stage associated
2 with the cached element is a next stage of a corresponding stage of a cache
3 of the progressive cache containing the cached element.

1 22. (canceled)

1 23. (currently amended) A system for rendering, comprising:
2 a rendering pipeline including a ~~plurality~~ set of stages connected
3 serially to each other as a sequence of stages so that output of a previous
4 stage provides input to a next stage, ~~and~~ a first stage is configured to receive
5 a rendering request for an object, ~~and~~ a last stage is configured to produce a
6 display image corresponding to the object, and the sequence of stages
7 includes, in order, a preprocessed shape descriptor determination stage, a
8 distance field determination stage, a distance values determination stage, an
9 antialiased intensities determination stage, and a colorized image
10 determination stage, and where the distance field determination stage
11 determines a distance from a point in a co-planar field to an edge of the
12 object, where the sign of the distance is negative if the point is outside the
13 object, positive if the point is inside the object, and points on the edge
14 having a zero distance;

15 a progressive cache including a ~~plurality~~ set of caches arranged to
16 store cached elements in a least finished to a most finished order, the set of
17 caches including a preprocessed shape descriptor cache, a distance field
18 cache, a distance values cache, an antialiased intensities cache, and a
19 colorized image cache; and

20 a cache controller configured to route a most finished cached element
21 from the progressive cache to a next stage of a corresponding stage of the
22 rendering pipeline and the output of a stage of the rendering pipeline to a
23 corresponding cache of the progressive cache;
24 means for querying a progressive cache to determine a cached element
25 most representing a display image satisfying a rendering request for an
26 object;
27 means for sending the cached element to a starting stage of a
28 rendering pipeline for the object, the starting stage associated with the
29 cached element; and
30 means for sending an output of the starting stage to an input of a next
31 stage of the rendering pipeline, a final stage of the rendering pipeline
32 determining the display image satisfying the rendering request.